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Final Report

Mine Seal Project, Phase 7
Beaverhead County, Montana
IFB 4188-G

January, 1987

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Final Report

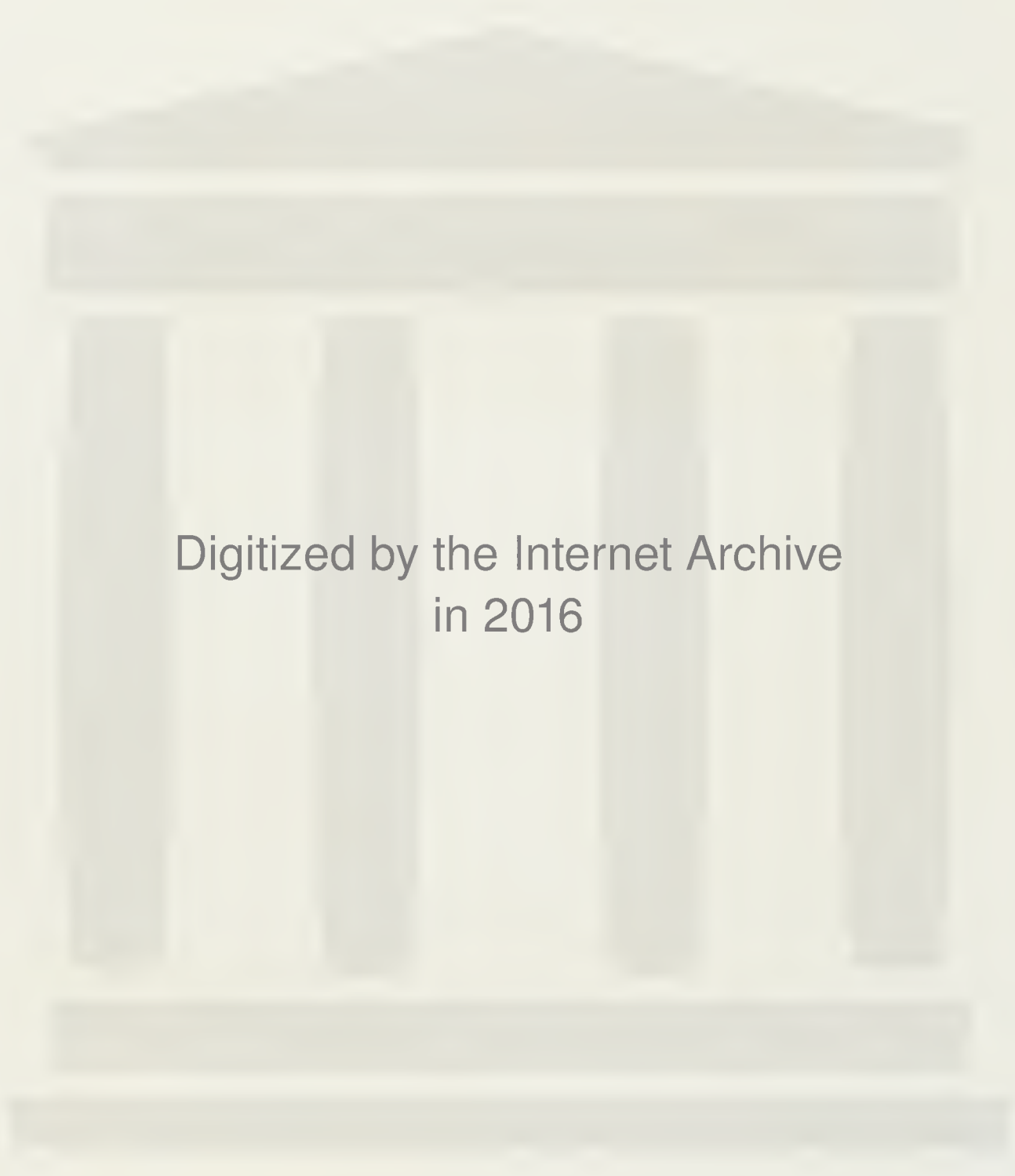
Mine Seal Project, Phase 7
Beaverhead County, Montana
IFB 4188-G

January, 1987

Prepared for: Mr. Richard Juntunen, Chief
Abandoned Mine Reclamation
Bureau
Department of State Lands
1625 11th Ave.
Helena, MT 59620

Prepared by: L.C. Hanson Company
Consulting Engineers
P.O. Box 299
Helena, MT 59624

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Bruce Brannon



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I. Introduction

A. Project Objectives

The Phase 7 Mine Seal Project was undertaken to eliminate the public safety hazards resulting from unreclaimed mine openings at several abandoned hardrock mines in Beaverhead County, Montana. Perimeter fencing of dangerous shafts was accomplished to eliminate accidental entry.

B. Project Location

The project covered twelve sites approximately ten miles northwest of Dillon, Montana, in the Argenta Mining District. Legal descriptions are listed below and site locations are shown on the vicinity map contained herein.

Argenta Mining District

Anaconda Site	T6S R10W Sec. 29 NW
Argenta Site	T6S R11W Sec. 13 SE
Brownell Site	T6S R10W Sec. 30 NE
Carbonate Site	T6S R10W Sec. 18 SW
Coolidge Site	T6S T10W Sec. 18 SW
Copper Bell Site	T6S R10W Sec. 29 SW
Hand Site	T6S R10W Sec. 29 NW
Iron Mountain Site	T6S R10W Sec. 30 NE
Jack Rabbit Site	T6S R10W Sec. 29 NW
Madison Site	T6S R11W Sec. 13 SE
Midnight Site	T6S R11W Sec. 13 SE
Sylvia Site	T6S R11W Sec. 13 SE

C. History

Hardrock mining has taken place in Montana since 1862 and was essentially unregulated from a reclamation standpoint for over one hundred years. This resulted in thousands of hazardous shafts and adits in mining districts across the state.

A brief history of the Argenta Mining District follows. Where production statistics are available for individual sites, they are noted.

Placers were discovered in 1862 and the first lode in 1865. Ore was shipped to Swansea, Wales, but soon the first Montana smelter was built in Argenta. A second was built in 1866 and a third in 1867. Lead and silver were the most important metals in the district and total production to 1930 has been estimated at \$1,500,000.

Argenta Mine - This mine was located in the late 1880's and produced 150 tons of ore.

Brownell - This mine was located in 1865 and was the second lode discovered in the district. Between 1882 & 1885, 5,000 tons of ore was shipped and a considerable amount is also reported from 1928

Coolidge - In 1898, 200 tons of ore is reported to have been shipped from the dumps.

Iron Mountain Mine - The lode was discovered in 1869 and in 1928 a considerable amount of ore was shipped from the property.

Jack Rabbit Mine - This mine is reported to be the deepest in the district and was discovered in the 1870's.

D. Site Description and Problems

The sites included in this project are located near a residential area, near historic sites, close to public roads and in recreation areas. All mine openings threatened public safety. The shafts involved were of depth great enough to prevent unaided escape upon entry.

II. Description of Project Reclamation

A. Project Planning

Backfill was recommended for all mine openings to permanently eliminate the hazards. All landowners objected to this, insisting instead on fencing. This technique does accomplish the goal of preventing accidental entry but is semi-permanent in nature and may require maintenance in the future.

B. Chronological History

Pre-Bid Conference	July 17, 1984
Bid Opening	July 31, 1984
Contract Award	August 27, 1984

Contract Awarded To:

Northwest Fence Products
P.O. Box 1204
Great Falls, MT 59403
(406)453-4632

Pre-construction Meeting	September 12, 1984
Notice to Proceed	September 22, 1984
Began Work	September 28, 1984
Project Completed	November 13, 1984

C. Equipment

Air Compressor with Jack Hammer
Dynamite for blasting post holes
Gas-Powered Drill

D. Construction Operations

The Contractor dug and/or blasted post holes.
Combination barbed and woven wire fence installed as
specified.

III. Cost Summary

A. Final Payment Request

A copy of the Final Payment Request is contained in
Appendix A. That document contains the final quantities
and costs for each work item.

B. Change Order

No Change Orders were executed during the course of the
project.

C. Cost Per Site / Unit

The following summary describes the work performed (with
measured quantities) and the total cost for each site:

1.	Anaconda Site	\$ 949.00
	a. Install wire fence (5.4 rods)	
	b. Install hazard signs (4 each)	
	c. Seed, fertilize & mulch	
2.	Argenta Site	\$ 3,197.00
	a. Install wire fence (33.8 rods)	
	b. Install hazard signs (12 each)	
	c. Seed, fertilize & mulch	
3.	Brownell Site	\$ 1,029.00
	a. Install wire fence (8.1 rods)	
	b. Install hazard signs (4 each)	
	c. Seed, fertilize & mulch	
4.	Carbonate Site	\$ 1,023.00
	a. Install wire fence (7.9 rods)	
	b. Install hazard signs (4 each)	
	c. Seed, fertilize & mulch	
5.	Coolidge Site	\$ 2,644.00
	a. Install wire fence (17.6 rods)	
	b. Install hazard signs (12 each)	
	c. Seed, fertilize & mulch	
6.	Copper Bell Site	\$ 1,678.00
	a. Install wire fence (11.8 rods)	
	b. Install hazard signs (8 each)	
	c. Seed, fertilize & mulch	
7.	Hand Site	\$ 2,279.00
	a. Install wire fence (17.6 rods)	
	b. Install hazard signs (11 each)	
	c. Seed, fertilize & mulch	
8.	Iron Mountain Site	\$ 2,722.00
	a. Install wire fence (30.9 rods)	
	b. Install hazard signs (11 each)	
	c. Seed, fertilize & mulch	
9.	Jack Rabbit Site	\$ 2,161.00
	a. Install wire fence (13.4 rods)	
	b. Install hazard signs (8 each)	
	c. Seed, fertilize & mulch	
10.	Madison Site	\$ 1,045.00
	a. Install wire fence (7.8 rods)	
	b. Install hazard signs (4 each)	
	c. Seed, fertilize & mulch	

11.	Midnight Site	\$ 850.00
	a. Install wire fence (6.6 rods)	
	b. Install hazard signs (3 each)	
	c. Seed, fertilize & mulch	
12.	Sylvia Site	\$ 1,381.00
	a. Install wire fence (11.4 rods)	
	b. Install hazard signs (4 each)	
	c. Seed, fertilize & mulch	

	Total Project Cost	\$ 20,958.00

IV. Summary

A. Completed Reclamation

The required work was completed within the Contract time allowed.

The project resulted in limiting access to the mine openings by constructing perimeter fencing. Hazard signs were installed where appropriate. Revegetation of disturbed areas was accomplished.

B. Comments

The Contractor completed the work as specified. Inefficient operations and planning resulted in delays.

Monitoring of all sites should be undertaken periodically to insure all fences remain intact.

V. Slides

The slide log and slides are contained in Appendix B.

APPENDIX A

FROM September 22, 1984 TO November 15, 1984

 PROJECT NAME MINE SEAL PROJECT, PHASE 7 - ARGENTA

 LOCATION BEAVERHEAD COUNTY, MONTANA PROJ. NO. IFB 4188-G

 NAME OF CONTRACTOR NORTHWEST FENCE PRODUCTS ADDRESS BOX 1204 Great Falls, MT 59403

CHANGE ORDERS			CONTRACT STATUS			
No.	Description	Amount	Total Amount	Completed Amount	Uncompleted Amount	Per Cent Complete
			21,098.00	20,957.85	-0-	100
Total Change Orders			-0-			
CONTRACT TO DATE INCLUDING CHANGE ORDERS			21,098.00	20,957.85	-0-	100

TOTAL RETAINAGE \$

SECURITIES ON DEPOSIT \$

ADJUSTED RETAINAGE \$

*For use only when securities are on deposit in lieu of 10% retainage.

COMPLETED TO DATE \$ 20,957.85

PLUS MATERIALS ON SITE \$ -0-

TOTAL COMPLETED TO DATE \$ 20,957.85

*10% OR ADJUSTED RETAINAGE \$ -0-

TOTAL AMOUNT EARNED TO DATE \$ 20,957.85

LESS PREVIOUS PAYMENTS \$ -0-

AMOUNT DUE THIS PAYMENT \$ 20,957.85

LESS 1% TAX \$ 209.58

TOTAL DUE CONTRACT \$ 20,748.27

RECEIVED

NOV 28 1984

LOWELL C. HANSON CO.

I certify that this claim is correct and just in all respects and that payment or credit has not been received.

Northwest Fence Products

(Contractor)

By

Date

RECOMMENDED BY:

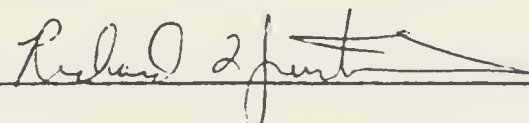
 L. C. Hanson Company
(Engineer)

By

Date

Approved By:

 Montana Department of State Lands
Owner



11/26/84

PAY REQUEST #1 (FINAL)

ITEMIZATION OF QUANTITIES AND COSTS

ITEM	DESCRIPTION	QUANTITY	UNIT PRICE	WORK COMPLETED TO DATE	COST COMPLETED WORK	PERCENT COMPLETE
1.	FENCE - WIRE TYPE CW OR CM	174 RODS	\$ 29.50	172.3 RODS	5,082.85	100
2.	PANEL - SINGLE TYPE CW	8 EACH	75.00	6 EACH	450.00	100
3.	PANEL - DOUBLE TYPE CW	84 EACH	120.00	85 EACH	10,200.00	100
4.	GATE - METAL 4 FT.	50 L.F.	18.00	50 L.F.	900.00	100
5.	DEADMAN	5 EACH	25.00	2 EACH	50.00	100
6.	INSTALL STATE-FURNISHED SIGNS	84 EACH	15.00	85 EACH	1,275.00	100
7.	SEED, FERTILIZE, MULCH	LUMP SUM	3,000.00	LUMP SUM	<u>3,000.00</u>	100
		TOTAL CONTRACT			\$ 20,957.85	

APPENDIX B

Phase 7 Mine Seal Project
Argenta Mining District, Beaverhead County
Slide Log

1.	Aug., 1983	Before:	Anaconda shaft - fence site
2.	Aug., 1983	Before:	Anaconda shaft - fence site
3.	April, 1984	Before:	Argenta site - view of mine
4.	April, 1984	Before:	Argenta shaft #1 - fence site
5.	April, 1984	Before:	Argenta shaft #1 - fence site
6.	April, 1984	Before:	Argenta shaft #2 - wood cover site
7.	April, 1984	Before:	Argenta shaft #2 - wood cover site
8.	April, 1984	Before:	Argenta shaft #2 - wood cover site
9.	Aug., 1983	Before:	Brownell shaft - fence site
10.	Aug., 1983	Before:	Brownell shaft - fence site
11.	Aug., 1983	Before:	Coolidge shaft #1 - fence site
12.	June, 1983	Before:	Coolidge shaft #2 - view of mine
13.	June, 1983	Before:	Coolidge shaft #2 - view of mine
14.	Aug., 1983	Before:	Coolidge shaft #2 - fence site
15.	Aug., 1983	Before:	Coolidge shaft #2 - fence site
16.	Aug., 1983	Before:	Coolidge shaft #2 - fence site
17.	Aug., 1983	Before:	Coolidge shaft #3 - fence site
18.	Aug., 1983	Before:	Coolidge shaft #3 - fence site
19.	Aug., 1983	Before:	Copper Bell shaft #1 - view of dump
20.	Aug., 1983	Before:	Copper Bell shaft #1 - fence site
21.	Aug., 1983	Before:	Copper Bell shaft #2 - fence site
22.	Aug., 1983	Before:	Hand site - view of mine
23.	Aug., 1983	Before:	Hand shaft #1 - fence site
24.	Aug., 1983	Before:	Hand shaft #2 - fence site
25.	Aug., 1983	Before:	Iron Mountain shaft #1 - fence site
26.	Aug., 1983	Before:	Iron Mountain shaft #1 - fence site
27.	Aug., 1983	Before:	Iron Mountain shaft #1 - fence site
28.	Aug., 1983	Before:	Jack Rabbit shaft #1 - fence site
29.	Aug., 1983	Before:	Jack Rabbit shaft #1 - fence site
30.	Aug., 1983	Before:	Jack Rabbit shaft #2 - fence site
31.	Aug., 1983	Before:	Jack Rabbit shaft #2 - fence site
32.	April, 1984	Before:	Madison shaft #1 - fence site
33.	April, 1984	Before:	Madison shafts #2 & #3 - wood cover sites
34.	April, 1984	Before:	Midnite shaft - fence site
35.	April, 1984	Before:	Midnite shaft - fence site
36.	April, 1984	Before:	Sylvia shaft #1 - fence site
37.	April, 1984	Before:	Sylvia shaft #1 - fence site
38.	April, 1984	Before:	Sylvia shaft #2 - fence site
39.	June, 1983		View of Argenta mines

